Math 212
Requiz Exam1Q4A

F 21 Oct 2016 / N 23 Oct 2016

Your name: _____

Exercise

(5 pt) Consider the parabolic cylinder $P \subseteq \mathbf{R}^3$ and the plane $H \subseteq \mathbf{R}^3$ given by

$$P : x = -y^2, \qquad H : x + y - z = -2,$$

respectively.

(a) (3 pt) Find a parametric equation $\mathbf{r}(t)$ for the curve C of intersection of P and H. Explicitly state the domain of $\mathbf{r}$.

(b) (2 pt) Find an equation for the tangent line to C at the point $(-4, 2, 0)$.